

Date: Wednesday, 06/08/2008 2:08:47 PM  
User: Julie Lecocq

Process Sheet

~~SKIP-2~~

Customer : CU-DAR001 Dart Helicopters Services  
Job Number : 41039-3  
Estimate Number : 12577  
P.O. Number :  
This Issue : 06/08/2008 S.O. No. :  
Prsht Rev. : NC  
First Issue : / / Type : LARGE FAB ASSY  
Previous Run : 40289

Drawing Name : STEP WELDMENT  
Part Number : D3562042  
Drawing Number : D3562 REV E  
Project Number : N/A  
Drawing Revision : E  
Material :  
Due Date : 29/08/2008

Qty: 3 Um: Each

Written By :  
Checked & Approved By : JLD 08-08-06  
Comment : Est Rev:A New Issue 06-11-09 JLM  
Est rev B ECN 987 07.10.09 EC verified by: DD  
Est Rev:C ECN1048 07-12-18 DD verified by: EC  
Est Rev:D 08-07-28 add chemical conversion coat DD  
verified by:EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D2622120C Step Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 5.0000 Each(s)

Qty Part # Description Batch:  
1 D2622-120C Extrusion B40937

Check Material for any Dents or Defects

2.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

3.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

4.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

08-09-03 4.5

# Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*SH 08.09.08* 5

6.0

D3560042

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 5.0000 Each(s)

ARM WELDMENT

Batch: *341281*

*B 41287 (2)*

*B 42369 (1)*

*SAD 08-12-18*

*SH 08.09.08* 7

7.0

D3560044

Arm Weldment



Comment: Qty.: 1.0000 Each(s)/Unit Total: 5.0000 Each(s)

ARM WELDMENT

Batch: *335298*

*B 41283*

*SAD 08-12-18*

*SH 08.09.08* 2

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 32.0000 Each(s)/Unit Total: 160.0000 Each(s)

Blind Rivet

batch: *m108990*

*m108990*

*SH 08.09.08* 2

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill Rivet holes as per dwg D3562. Touch up alodine

*SAD 08-12-19 (3) SH 08.09.08* 2

2- Rivet legs using Magnabond as per dwg D3562.

\*\*\*\*\*Ensure to wipe off any excess magnabond \*\*\*\*\*

*SAD 08-12-19 (3) SH 08.09.08* 2

A/R Magnabond 6398 Batch: *m108966*

*m108966*

*SAD 08-12-19 (3) SH 08.09.08* 2

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*SAD 08/12/19 (X3)*

11.0

D2734

Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total: 10.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D2734

End Cap *339179*

*SH 08.12.22* 2



Date: Wednesday, 06/08/2008 2:08:47 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description:

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod *m109560*  
*m108037*

2-Grind end cap welds flush as per Dwg D3562

*08-12-22*

*09-01-05*

*SAD*

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*08-12-23*

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*09/01/09*

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*m-h 09/01/10*

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

*m-h 09/01/10*

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch: *m109917*

*FL 09/01/12*

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*09/01/13*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3562-042 PAR #: N/A Fault Category: Prod/Prod. Large NCR: Yes No DQA: D Date: 09/01/14  
 Resolution: Rework Disposition: Rework QA: N/C Closed: D Date: 09/01/14

NCR: <u>41039-3</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>9/01/05</u>	<u># 14</u>	<u>During QCS inspection it was found that a small piece of debris is inside the step. RC: The magnabond was not cleaned properly in the last rivet hole.</u>	<u>[Signature]</u>	<u>drill small hole to remove debris (foreign object) from step in end cap.</u>	<u>[Signature]</u> <u>09-01-07</u>	<u>S</u> <u>09/01/09</u>	<u>[Signature]</u>	<u>[Signature]</u>
			<u>[Signature]</u>	<u><del>Remove &amp; Repair</del> Fill hole with weld as per Q57004. A/E # <u>W108037</u></u>	<u>[Signature]</u> <u>09-01-07</u>		<u>[Signature]</u>	<u>[Signature]</u>
			<u>[Signature]</u>	<u>Build weld flange</u>	<u>SAD</u> <u>09-01-08</u>	<u>S</u> <u>09/09/07</u>	<u>[Signature]</u>	<u>[Signature]</u>

NOTE: Date & initial all entries



Date: Wednesday, 06/08/2008 2:08:47 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 41039

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1  
Pick Assembly Kit

G-A

09/01/13 @

20.0

QC21

FINAL INSPECTION/W/O RELEASE



09/01/14

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



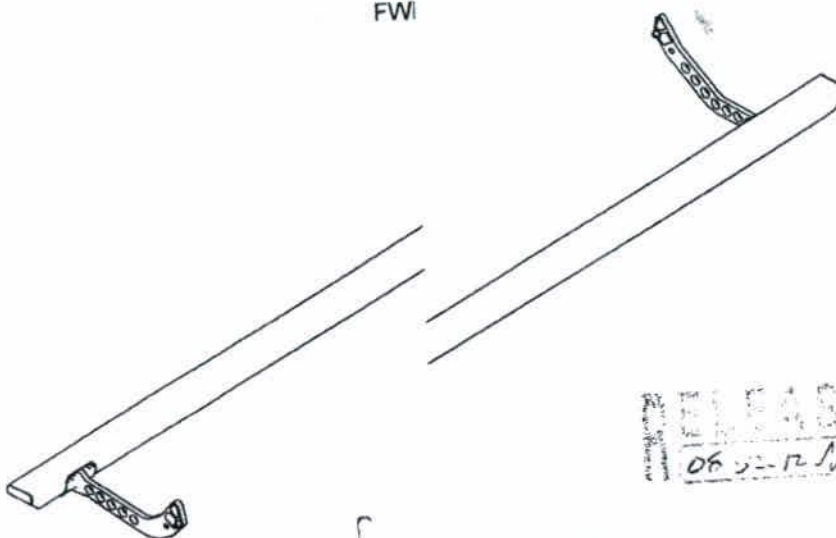
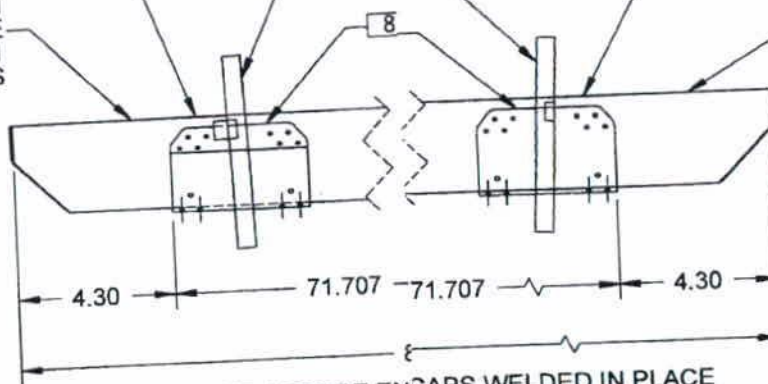
MF 09-01-13

D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS

D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS



### D3562-041 LH STEP ASSEMBLY

#### NOTES:

1) MATERIAL: N/A

2) FINISH:

i) CHEMICAL CONVERSION COAT STEP PER DART QSI 005 4.1 BEFORE ASSEMBLY

ii) POWDER COAT ASSEMBLY GLOSS WHITE, ADD D2808, REMOVE 4 RIVETS

GREY SAND TO STEP

BLACK SAND

GREEN SAND

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.1

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE WELDING

9) WELDING: PER DART QSI 004

2734 END PLATE ON D3562-042	PH	08.01.11
EPACER NOTE: REDRAWN IN	DC	07.11.16
ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
ED TO STEP	CP	07.01.15
	CP	06.09.26
DESCRIPTION	BY	DATE

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.

D3562

REV. E

SHEET 1 OF 1

TITLE

STEP ASSEMBLY

SCALE

1:5

COPYRIGHT © 2006 BY DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 46039

D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

TRANSFER DRILL #30  
DEBURR & TOUCH UP HOLES  
WITH CHEMICAL CONVERSION  
COAT BEFORE RIVETING  
(32 PLACES PER STEP)

REFER TO STEP  
END DETAIL

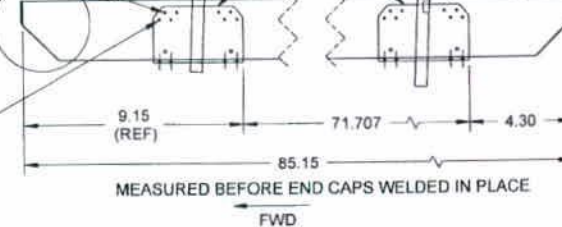
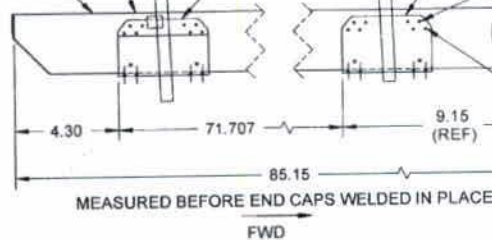
INSTALL MS20600AD4W5 RIVET  
(32 PLACES PER STEP)

D3560-044 ARM WELDMENT

D3560-042 ARM WELDMENT

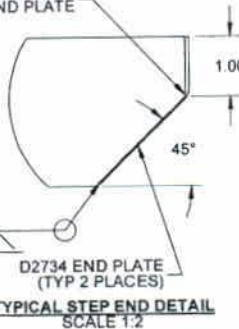
D3562-1,  
MAKE FROM  
EXTRUSION D2622

2  
APPLY BLACK  
ANTI-SKID ON  
TOP SURFACE  
TO BOTTOM  
OF TOP RADIUS



ROUND CORNER OF EXTRUSION TO  
MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100%  
VISUALLY INSPECTED BY A  
QUALIFIED INSPECTOR PER  
DART QSI 004



REFERENCE OR

**D3562-041 LH STEP ASSEMBLY**

**D3562-042 RH STEP ASSEMBLY**

**NOTES:**

1) MATERIAL: N/A

2) FINISH:

i) CHEMICAL CONVERSION COAT STEP EXTRUSION

PER DART QSI 005 4.1 BEFORE ASSEMBLY

ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR  
GREY SANDTEX (4.3.5.6) OR  
BLACK SANDTEX (4.3.5.7) OR  
GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN  
THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH  
MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.

9) WELDING: PER DART QSI 004

QTY -041	QTY -042	P/N	DESCRIPTION
X		D3562-041	LH STEP ASSEMBLY
	X	D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
1	1	D3560-042	ARM WELDMENT
1		D3560-043	ARM WELDMENT
1	1	D3560-044	ARM WELDMENT
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

E	ADD QTY (2) TO D2734 END PLATE ON D3562-042	PH	08.01.11
D	REMOVE D2806 SPACER NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2806, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.01.11		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.  
**D3562** REV. E  
SHEET 1 OF 1

TITLE  
**STEP ASSEMBLY** SCALE  
1:5

COPYRIGHT © 2008 BY DART AEROSPACE LTD  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS  
NOT TO BE USED FOR ANY PURPOSES, OR REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT  
WRITTEN PERMISSION FROM DART AEROSPACE LTD.